



Energizing the World, Bettering People's Lives



NEVADA EXPLORATION PROJECT



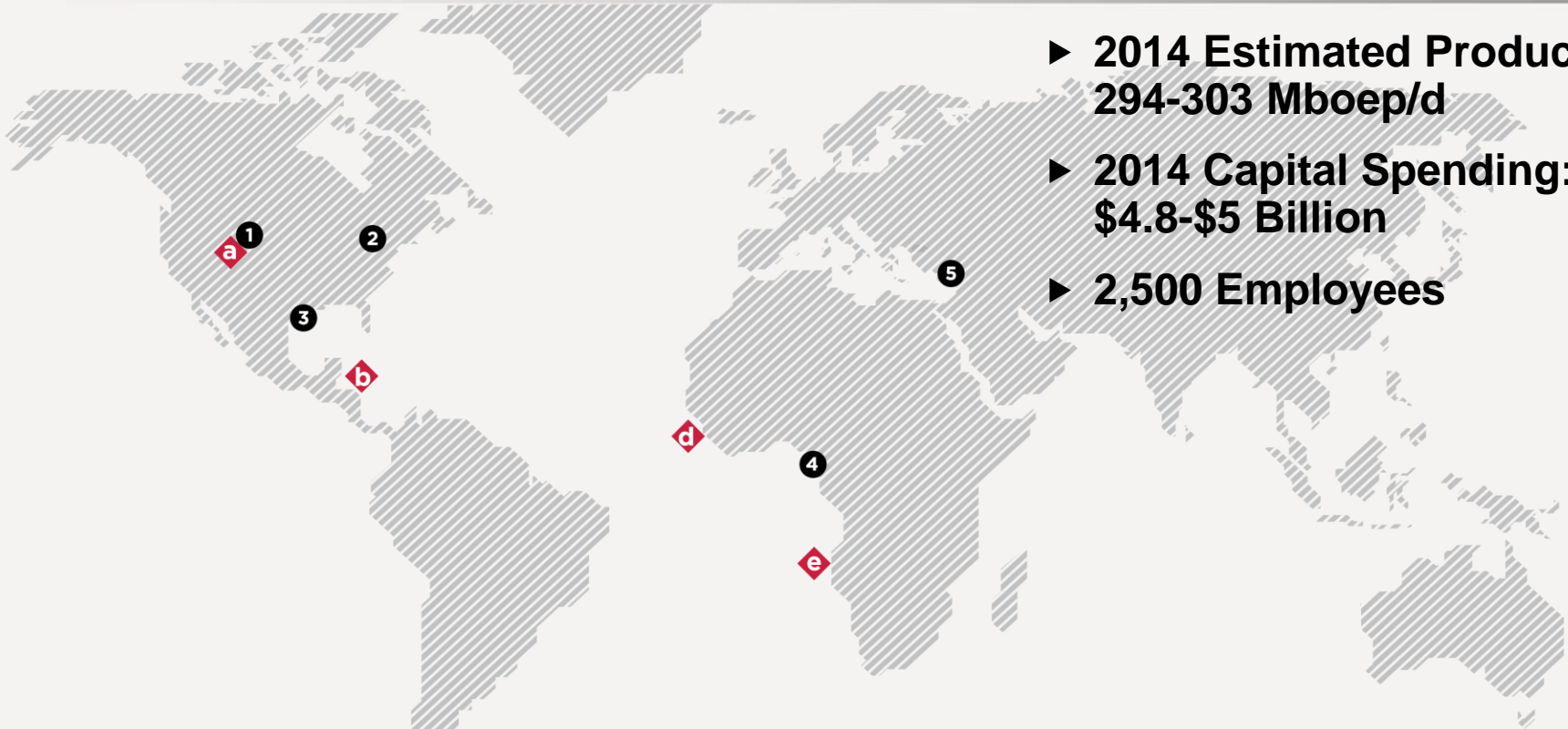
Thursday, August 28, 2014

Northeastern Great Basin Resource Advisory Council



A Global Independent Exploration and Production Company

Energizing the World, Bettering People's Lives



- ▶ 2014 Estimated Production: 294-303 Mboep/d
- ▶ 2014 Capital Spending: \$4.8-\$5 Billion
- ▶ 2,500 Employees

5 core operating areas

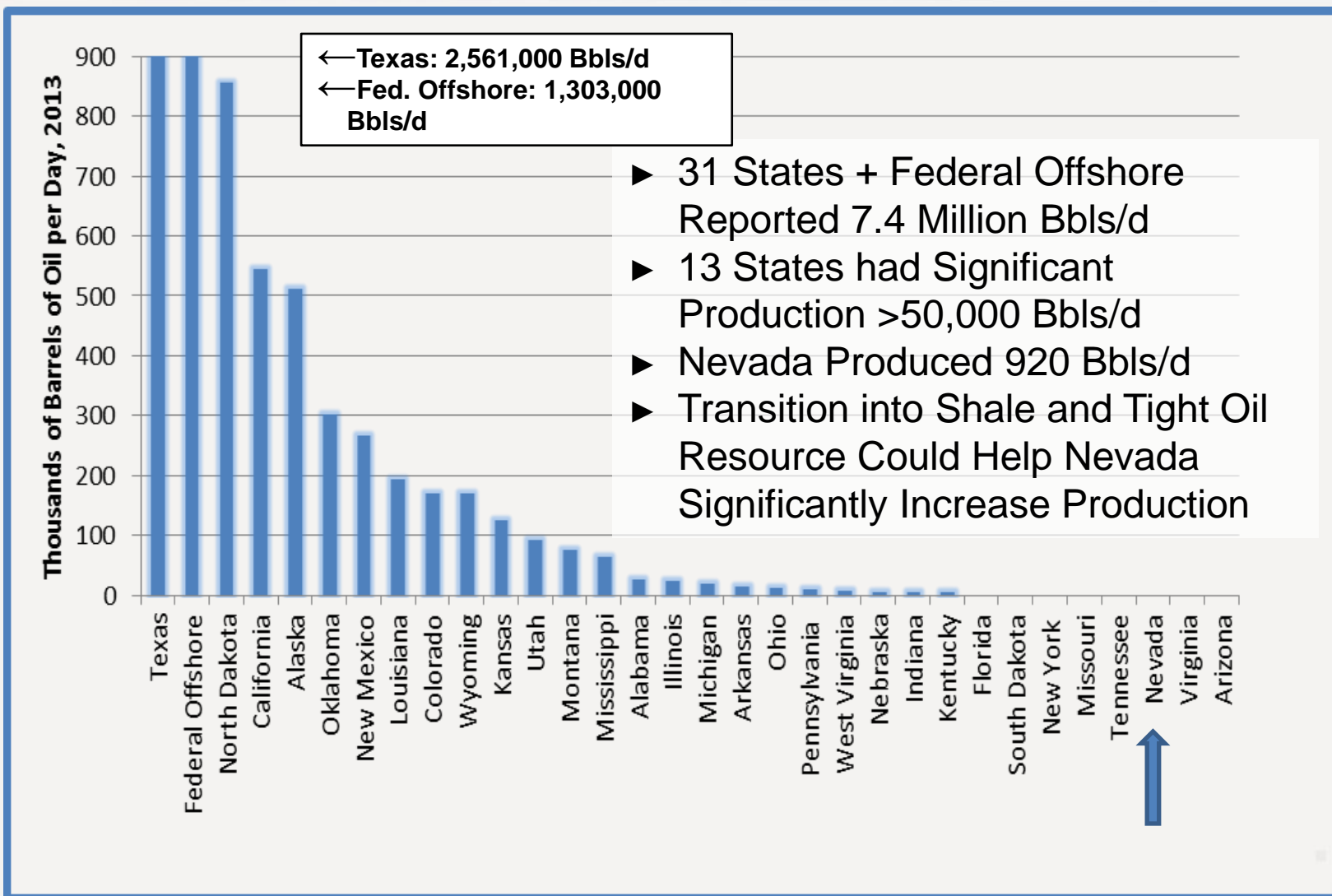
- ① DJ Basin
- ② Marcellus Shale
- ③ Gulf of Mexico
- ④ West Africa
- ⑤ Eastern Mediterranean

5 new ventures

- a Nevada
- b Nicaragua
- c Falkland Islands
- d Sierra Leone
- e Gabon

2013 Production by State

Barrels per day (Bbls/d)



Source: U.S. Energy Administration (EIA)

Northeast Nevada Exploration

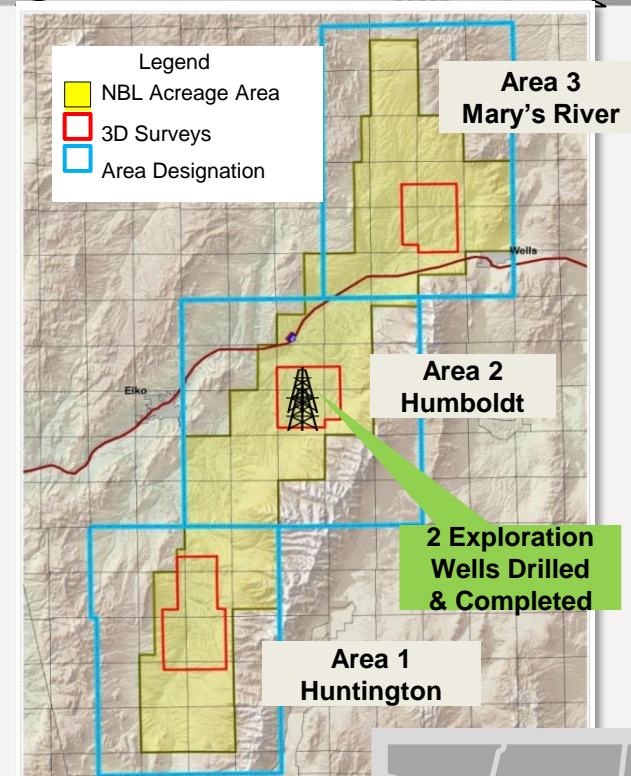
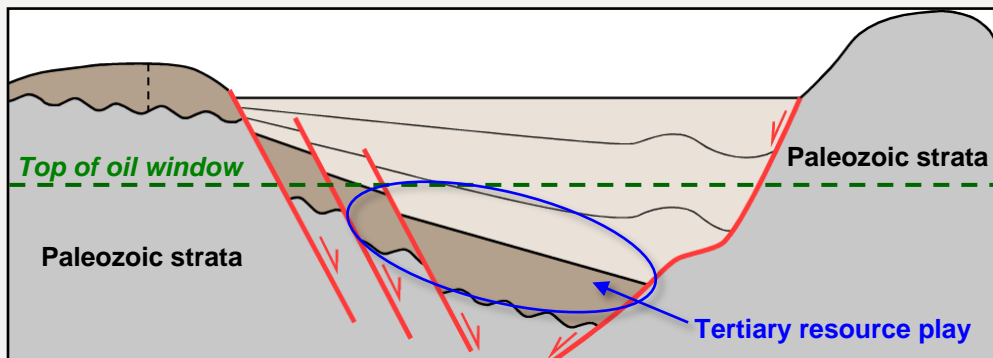
► 372,000 Net Acres

- ▲ 66% private acreage, 34% federal

► Play Characteristics

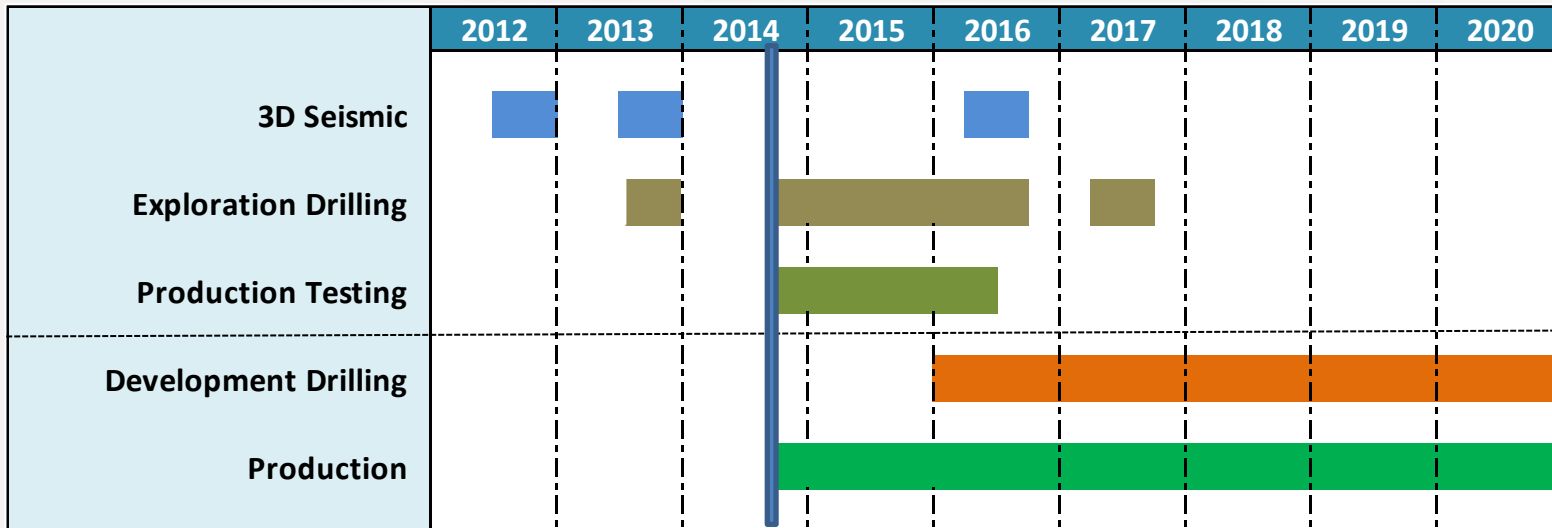
- ▲ Target depth range 6,000 - 12,000 ft.
- ▲ Unconventional tight oil prospect
- ▲ Hydraulic fracture stimulation required

► Pilot Test to determine viability



Northeast Nevada Exploration Plan

Potential success case

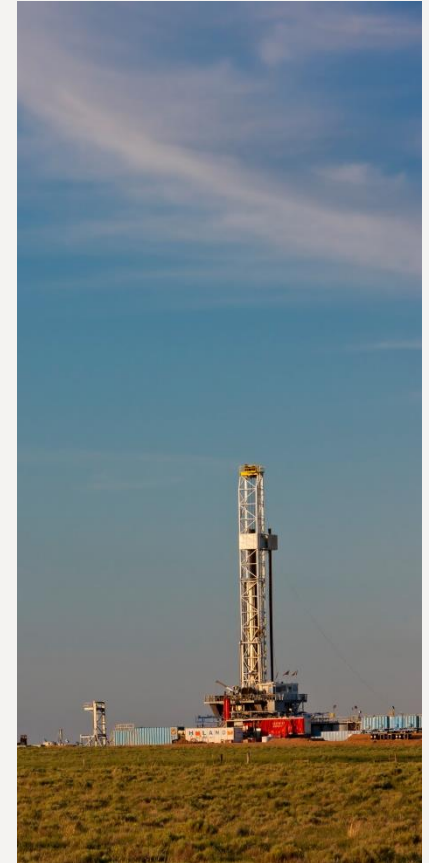


► Significant exploration investment over 4 years (2011 – 2015)

- ◆ Leases
- ◆ Seismic
- ◆ Exploratory drilling

Project Status

- ▶ **Drilled 2 exploration wells in Humboldt Area in 2013**
 - ⤴ Encountered Elko Formation
 - ⤴ Oil shows during drilling
 - ⤴ Hydrocarbon saturation present
 - ⤴ Total organic content (TOC) present
- ▶ **Hydraulic fracture completions**
 - ⤴ NDOM on location to witness both wells
- ▶ **EAs approved for Mary's River and Huntington Areas**
- ▶ **Next steps**
 - ⤴ Long-term production test on first well
 - ⤴ Evaluate horizontal vs. vertical approach
 - ⤴ Additional exploratory drilling 4Q 2014



Reducing Our Footprint

► Single Well Vertical Pad

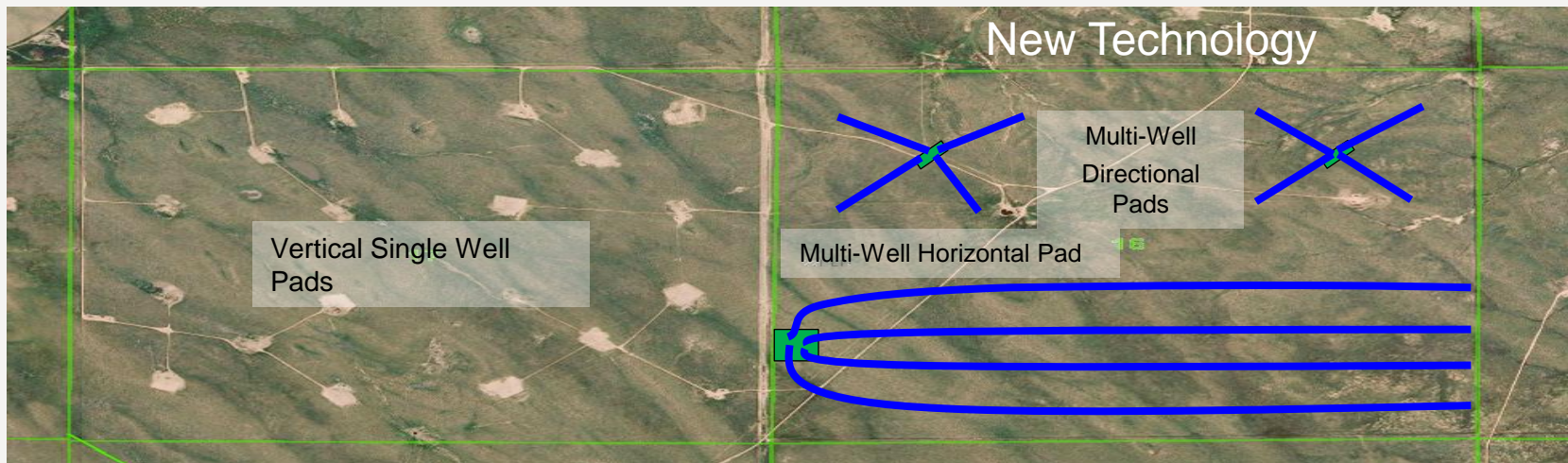
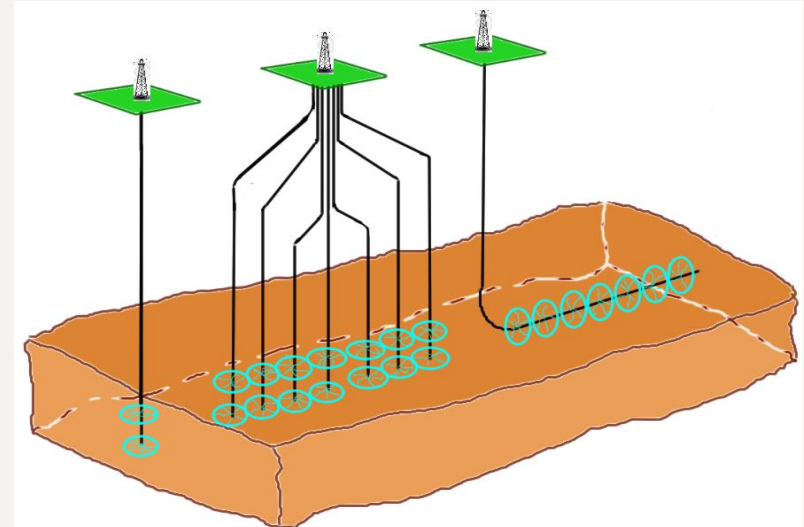
- Access multiple pay zones vertically at single point

► Multi-Well Directional Pad

- Access multiple pay zones vertically
- Cover broad aerial extent from single surface location

► Horizontal Pad

- Equivalent to several vertical wells in one zone only



1 Mile

Life Cycle of Well

- ▶ **Site Preparation: 3 – 7 Days**
- ▶ **Drilling:**
 - ▲ Typical development wells take 7 – 14 days
 - ▲ Exploration wells may take up to 60 days
- ▶ **Hydraulic Fracturing: 2 – 3 Days**
- ▶ **Evaluation of Facility Build: 30 – 60 Days**
- ▶ **Long-term Production: 20 – 30 Years**



7 – 60 days



2-3 days



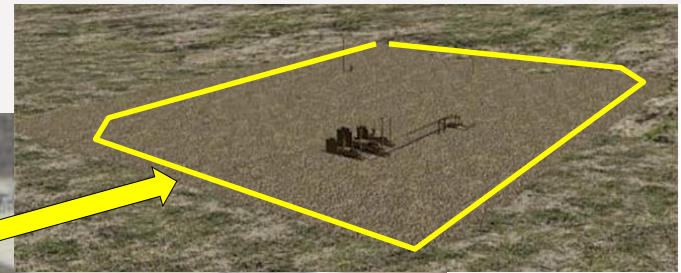
Life of Well

We Respect the Environment

Best Management Practices

Drilling Phase to Production Phase

Reclaim pad site from ~ 6 acres to ~ 2 acres



Low-Profile Production Equipment



Hydraulic Fracturing

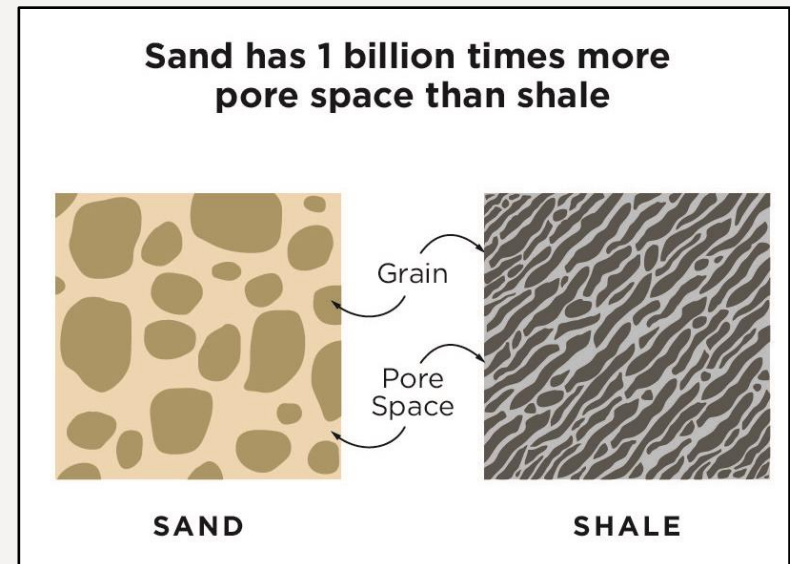
Increasing production

► **Geologic conditions (porosity and permeability) may trap oil and natural gas in underground rock formations**

- ⌘ Porosity is the percentage of the rock's volume that is open space, or pores, that can hold oil and natural gas
- ⌘ Permeability is the flow rate water, oil or natural gas can pass through pore spaces. Smaller pore spaces are more difficult – resulting in lower permeability.

► **View video**

- ✓ Hydraulic fracturing is used to create a connection between the small pore spaces – enabling trapped oil and natural gas to flow into well bores.
- ✓ The process enables recovery of oil and natural gas that would not otherwise be accessible.



Hydraulic Fracturing

A safe and responsible completion process

- ▶ 2 – 3 day process after drilling / before production
- ▶ Done safely and responsibly more than 60 years
- ▶ More than 90% of new U.S. wells are fracked
- ▶ Thousands of feet below freshwater aquifers
- ▶ Sand, water and chemicals are no secret – log on to fracfocus.org and see
- ▶ Several layers of cement and steel
- ▶ Dramatically increases production per well and decreases number of wells
- ▶ Reduces dependence on foreign oil in turbulent world

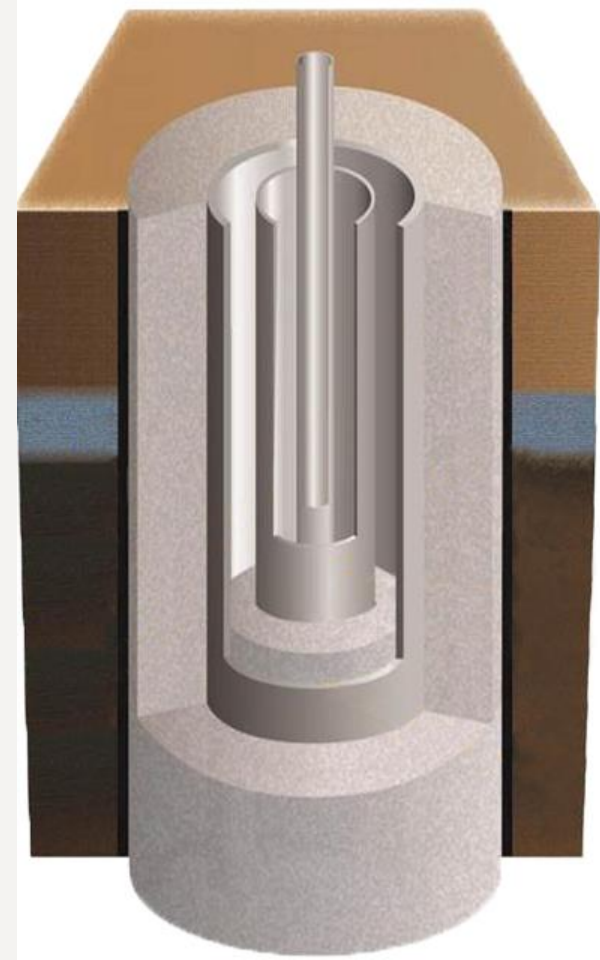


Wellbore Construction

Protecting Water and the Environment

- ▶ **Best available technology used to protect water and environment**
 - ⌘ Engineers design wellbore construction
 - ⌘ Isolation below surface through multiple layers of steel casing and cement
 - ⌘ Experts monitor hydraulic fracturing that occurs thousands of feet below groundwater aquifers
 - ⌘ Baseline water sampling before drilling and after completion to ensure water quality

- ▶ **Exploration wells drilled 6,000-12,000 feet below groundwater aquifers used by public**
 - ⌘ Fresh water utilized by public is within a few hundred feet of the surface and is protected



Water Resources

► Sources

- ⤴ Local groundwater through approved state permits and landowner sources
- ⤴ Back-up – excess supplies through local conservancy districts

► Recycling

- ⤴ Developed a rigorous recycling and reuse program in other areas
- ⤴ Anticipate recycling in Nevada, pending success in drilling

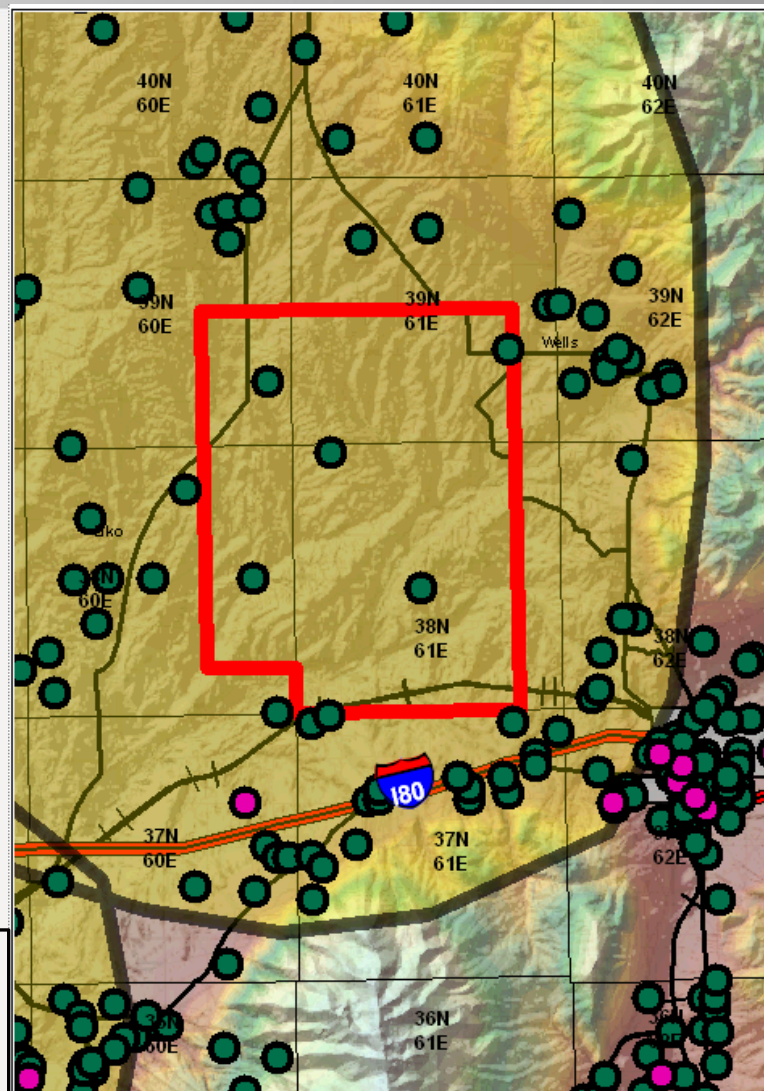
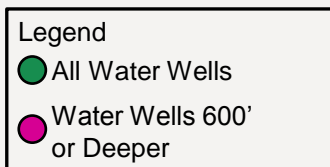
► Produced water management options

- ⤴ Treatment, reuse, recycle
- ⤴ Commercial disposal facilities
- ⤴ Permitted underground injection
- ⤴ Surface evaporation ponds

► Desert Research Institute conducting a water aquifer study that will help guide our development plans

Groundwater Protection: Water Well Sampling

- ▶ One-mile radius review around each drilled well
- ▶ Predrill water-well sample collection and testing
- ▶ Retest following completion of final well on pad
- ▶ Exploratory wells drilled 6,000-12,000 feet below the surface – at least 1 mile deeper than groundwater wells



Air Quality and Wildlife

► Air Quality

- ✦ Utilize emission controls to prevent elevated ground level ozone levels
- ✦ Utilize produced natural gas to power equipment
- ✦ Take measures to reduce truck traffic emissions
- ✦ Utilize dust-suppression best-management practices, in compliance with Department of Environmental Protection
- ✦ Reduce truck speeds for safety and dust suppression

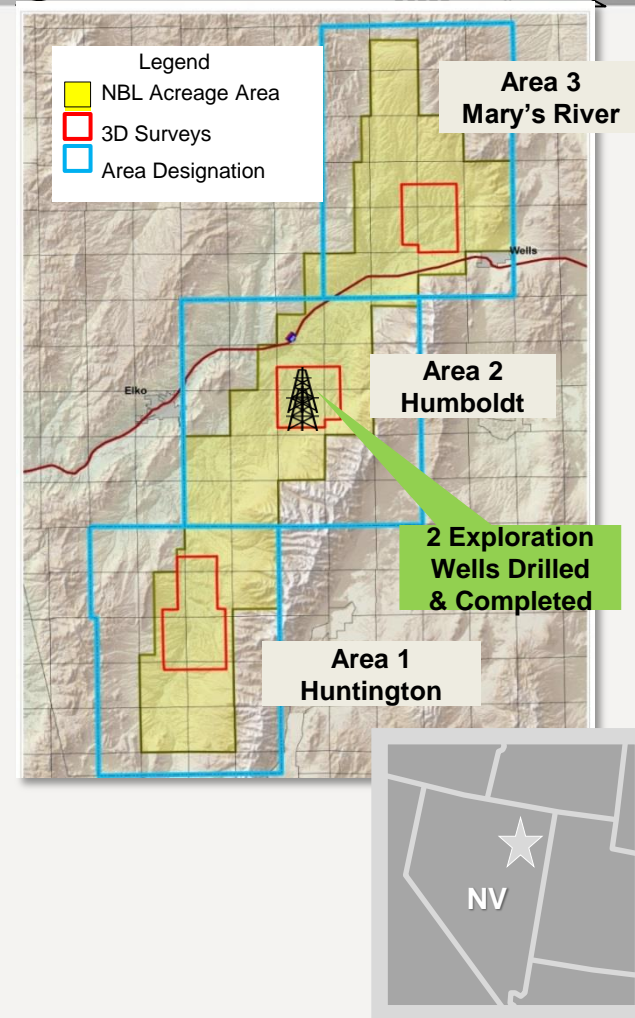
► Wildlife Protective Measures and Adaptive Management

- ✦ Conducted surveys to locate species and habitat
- ✦ Operations designed to avoid or reduce impact
- ✦ Implementing sage grouse protective measures
- ✦ Conservation partnership with Barrick Mining



Northeast Nevada Exploration

- ▶ Working together for the energy we need, the economy we want and the environment we value
- ▶ We are committed to protection of human health, the environment and wildlife
- ▶ Effective regulation is good for communities and for business
- ▶ We believe open and transparent communication is an integral part of safe and responsible energy development



Forward-looking Statements and Non-GAAP Measures

This presentation contains certain “forward-looking statements” within the meaning of the federal securities law. Words such as “anticipates,” “believes,” “expects,” “intends,” “will,” “should,” “may,” and similar expressions may be used to identify forward-looking statements. Forward-looking statements are not statements of historical fact and reflect Noble Energy’s current views about future events. They include estimates of oil and natural gas reserves and resources, estimates of future production, assumptions regarding future oil and natural gas pricing, planned drilling activity, future results of operations, projected cash flow and liquidity, business strategy and other plans and objectives for future operations. No assurances can be given that the forward-looking statements contained in this presentation will occur as projected, and actual results may differ materially from those projected. Forward-looking statements are based on current expectations, estimates and assumptions that involve a number of risks and uncertainties that could cause actual results to differ materially from those projected. These risks include, without limitation, the volatility in commodity prices for crude oil and natural gas, the presence or recoverability of estimated reserves, the ability to replace reserves, environmental risks, drilling and operating risks, exploration and development risks, competition, government regulation or other actions, the ability of management to execute its plans to meet its goals and other risks inherent in Noble Energy’s business that are discussed in its most recent Form 10-K and in other reports on file with the Securities and Exchange Commission. These reports are also available from Noble Energy’s offices or website, <http://www.nobleenergyinc.com>. Forward-looking statements are based on the estimates and opinions of management at the time the statements are made. Noble Energy does not assume any obligation to update forward-looking statements should circumstances or management’s estimates or opinions change.

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